From: Au, Doreen
To: Vince Centioni

Subject: RE: A few follow-up questions

Date: Wednesday, August 30, 2017 6:39:00 PM

Attachments: <u>image001.png</u>

Thank you for this information. -Doreen

From: Vince Centioni [mailto:V.Centioni@3vsigmausa.com]

Sent: Wednesday, August 30, 2017 3:58 PM **To:** Au, Doreen <Au.Doreen@epa.gov>

Cc: Scott McNair <S.McNair@3vsigmausa.com>; Ryan Dorsey <R.Dorsey@3vsigmausa.com>

Subject: RE: A few follow-up questions

Importance: High

Doreen,

I was able to locate the original hard copies of the Fe/F bio exp for the WWTP Water 9 simulation. In this you will see QC analytical for methanol at different stages of the WWTP. R-102 (final heterotrophic bioreactors) R-301 (final autotrophic bioreactor), VA tanks (mixing feed vessels into the bioreactors), TK101 104 (equalization tanks storing water from the Stripper). My predecessor John Schroer followed the EPA regulations in calculating the Fbio coefficient (see attached). From there he was able to run the Water 9 simulation following again the EPA regulations and procedure.

I have forwarded this package to him, so if have any questions I could always reach out.

'Thanks Vince

Vince Centioni

Environmental Manager

cid:image001.png@01D15E93.E9A80080



888 Woodstock St. Georgetown, SC 29440 Office: 843-520-5128 Mobile: 843-240-0577

Email: v.centioni@3VSigmaUSA.com

From: Au, Doreen [mailto:Au.Doreen@epa.gov] Sent: Tuesday, August 15, 2017 11:47 AM

To: Vince Centioni

Cc: Scott McNair; Ryan Dorsey

Subject: RE: A few follow-up questions

Thank you Vince,

I will include these spreadsheets in the report. -Doreen

From: Vince Centioni [mailto:V.Centioni@3vsigmausa.com]

Sent: Tuesday, August 15, 2017 9:39 AM **To:** Au, Doreen < <u>Au.Doreen@epa.gov</u>>

Cc: Scott McNair < S.McNair@3vsigmausa.com >; Ryan Dorsey < R.Dorsey@3vsigmausa.com >

Subject: RE: A few follow-up questions

Importance: High

I will look for the hard copies, but I believe John Schroer submitted the electronic files to SC DHEC/EPA so they could see each cell formula etc. See attached email I sent to John Schroer. In it contains his Water 9 files, and the equation you are referring to.

Vince Centioni

Environmental Manager

cid:image001.png@01D15E93.E9A80080

888 Woodstock St. Georgetown, SC 29440 Office: 843-520-5128 Mobile: 843-240-0577

Email: v.centioni@3VSigmaUSA.com

From: Au, Doreen [mailto:Au.Doreen@epa.gov]
Sent: Tuesday, August 15, 2017 11:17 AM

To: Vince Centioni

Subject: RE: A few follow-up questions

Thank you Vince,

Just one thing I noticed missing, if you have a copy of it, it would be useful for us to put into the report. In the April 2011 revised Notification of Compliance Status Report for the MON, there is an appendix H that was submitted regarding the use of your biological treatment for methanol. In appendix H, there is a reference to Addendum 3, Equation 1 of 63.2485. This is not included in NEIC's copy. It only contains a cover sheet for the addendum, but no attachment.

Thank you, Doreen

From: Vince Centioni [mailto:V.Centioni@3vsigmausa.com]

Sent: Tuesday, August 15, 2017 7:51 AM **To:** Au, Doreen <<u>Au.Doreen@epa.gov</u>>

Cc: Scott McNair < S.McNair@3vsigmausa.com >; Ryan Dorsey < R.Dorsey@3vsigmausa.com >

Subject: RE: A few follow-up questions

Importance: High

• V321: 4"x4" PVCV Open @ 18"WC vac opens @: 6"WC

• TK510: 3" PVCV Opens @: 12"WC vac opens @: 1.3"WC

• TK510: 8" PSV Opens @: 12"WC full open @: 24"WC

• V405: 4"x4" PVCV Opens @: 1psi vac opens @: 1"WC

'Let me know if you need anything else

Thanks

Vince Centioni

Environmental Manager

cid:image001.png@01D15E93.E9A80080



888 Woodstock St. Georgetown, SC 29440 Office: 843-520-5128 Mobile: 843-240-0577

Email: v.centioni@3VSigmaUSA.com

From: Au, Doreen [mailto:Au.Doreen@epa.gov]

Sent: Tuesday, July 25, 2017 4:22 PM

To: Vince Centioni

Subject: RE: A few follow-up questions Thank you for the heads up. -Doreen

From: Vince Centioni [mailto:V.Centioni@3vsigmausa.com]

Sent: Monday, July 24, 2017 5:28 PM

To: Au, Doreen <Au.Doreen@epa.gov>

Subject: Re: A few follow-up questions

I mistakenly repeated the flow out to the POTW & river in 2015 for 2016. I'll amend that tomorrow.

Fraction WW discharges to

POTW 2016

Total annual 2016 to POTW Total annual 2016 to Sampit	14600385 16366111	14.600 16.366	0,	47.1 52.9	, ,
Total discharge 2016	30966496	30.966	mgy		

Sent from my iPhone

On Jul 24, 2017, at 5:30 PM, Vince Centioni < <u>V.Centioni@3vsigmausa.com</u> > wrote:

So based on the modeling from Water 9 see below:

2016 TRANSFERS TO WWTP TOTALS				Qty Discharge	ı	Qty Air		Qty Bio
	MeCl	212	lbs		0		157	55
	MEOH	104392	lbs		47		1323	102970
	Xylene	2150	lbs		0		1459	690
2015 TRANSFERS TO WWTP				Qty				
TOTALS				Discharge		Qty Air		Qty Bio
	MeCl	468	lbs		0		346	122
	MEOH	93869	lbs		42		1189	92590
	Xylene	2026	lbs		0		1375	651
2014 TRANSFERS								
TO WWTP TOTALS				Qty		Oty Air		Oty Pio
TOTALS	MeCl	319	lbs	Discharge	0	Qty Air	236	Qty Bio 83
	MEOH	74375	lbs		34		942	73362
	Xylene	1078	lbs		0		732	346
	Aylene	1070	103	Qty	U		132	340
2013 TRANSF	ERS TO	WWTP TOTALS		Discharge	Qty	/ Air	Qt	y Bio
MeCl		273	lbs	0	•	202		71
MEOH		33532	lbs	15		425	5 ;	33075
Xylene		751	lbs	0		510)	241
				Qty				
	ERS TO	WWTP TOTALS			Qty A		Qty B	
MeCl		465	lbs	0		344		121
MEOH		65076	lbs	29		825	641	189
Xylene		1290	lbs	0		876		114

'Thanks Vince

Vince Centioni

Environmental Manager

<image001.png>

888 Woodstock St.

Georgetown, SC 29440 Office: 843-520-5128 Mobile: 843-240-0577

Email: v.centioni@3VSigmaUSA.com

From: Au, Doreen [mailto:Au.Doreen@epa.gov]

Sent: Monday, July 24, 2017 4:25 PM

To: Vince Centioni

Subject: RE: A few follow-up questions

Thank you! -Doreen

From: Vince Centioni [mailto:V.Centioni@3vsigmausa.com]

Sent: Monday, July 24, 2017 2:22 PM **To:** Au, Doreen <<u>Au.Doreen@epa.gov</u>>

Cc: Scott McNair < <u>S.McNair@3vsigmausa.com</u>>; Ryan Dorsey < <u>R.Dorsey@3vsigmausa.com</u>>; Schneider, Matthew < <u>Schneider.Matthew@epa.gov</u>>; Alex Llyod < <u>a.lloyd@3vsigmausa.com</u>>; Paul

Hancock < P.Hancock@3vsigmausa.com > Subject: RE: A few follow-up questions

Importance: High

Ignore the V-586 batches on these sheets. Some of the batches were re-stripped. You need to reference my WW Transfer Logs for V-586. I also attached the Water 9 data submitted annually in my TRI reports. The models are conducted every 3 years in correlation to our National Emissions Inventory Report submitted to SC DHEC. The last model was conducted in 2014.

<u>Fraction WW discharges to POTW 2012</u>

1011120	<u></u>						
Total annu	al 2012 to P	OTW	12852696	12.853	mgy	34.7 %	, 0
Total annu	al 2012 to S	ampit	24239525			65.3 %	, 0
	narge 2012	·		37.092	mgy		
Water 9 Da	J				37		
		Outlet					
	Inlet rate	rate	Qty to air	Qty to bio	Outlet rate	Qty to air	Qty to bio
	lb/hr	lb/hr	lb/hr	lb/hr	% of inlet	% of inlet	% of inlet
MeCl	0.024	0.00	0.0155	0.0083	0.0010%	74%	26%
MEOH	5.82	0.00	0.07	5.74	0.045%	1%	99%
Xylene	0.28	0.00	0.19	0.09	0.000%	68%	32%
-							99.9%
Fraction W	/W discharge	es to					
POTW 201	<u>13</u>						
Total annu	al 2013 to P	OTW	12327871	12.328	3 mgy	34.2	%
Total annu	al 2013 to S	ampit	23720000	23.720) mgy	65.8	%
Total disch	narge						
2013				36.048	3 mgy		
Water 9 Da	ata 2013						
						Qty to	
	Inlet rate	Outlet rate	Qty to air	Qty to bid		air	Qty to bio
	lb/hr	lb/hr	lb/hr	lb/h		% of inlet	% of inlet
MeCl	0.024	0.00	0.0155	0.0083		74%	26%
MEOH	5.82	0.00	0.07	5.74	4 0.045%	1%	99%
Xylene	0.28	0.00	0.19	0.09	0.000%	68%	32%
							99.9%
	<u>/W discharge</u>	es to POTW					
<u>2014</u>							
				,			
I otal annu	al 2014 to P	OIW	12936430	12.9	936 mgy	39.	1 %

Water 9 Data 2014

Total discharge 2014

Total annual 2014 to Sampit

						Qty to	
	Inlet rate	Outlet rate	Qty to air	Qty to bio	Outlet rate	air	Qty to bio
	lb/hr	lb/hr	lb/hr	lb/hr	% of inlet	% of inlet	% of inlet
MeCl	0.024	0.00	0.0155	0.0083	0.0010%	74%	26%
MEOH	5.82	0.00	0.07	5.74	0.045%	1%	99%
Xylene	0.28	0.00	0.19	0.09	0.000%	68%	32%
							99.9%

20.169 mgy

33.105 mgy

60.9

20168905

<u>Fraction WW discharges to POTW</u> 2015

Total annual 2015 to POTW	14600385	14.600	mgy	47.1	%
Total annual 2015 to Sampit	16366111	16.366	mgy	52.9	%
Total discharge 2015	30966496	30.966	mav		

Water 9 Data 2015

	Inlet rate	Outlet rate	Qty to air	Qty to bio	Outlet rate	Qty to air	Qty to bio
	lb/hr	lb/hr	lb/hr	lb/hr	% of inlet	% of inlet	% of inlet
MeCl	0.024	0.00	0.0155	0.0083	0.0010%	74%	26%
MEOH	5.82	0.00	0.07	5.74	0.045%	1%	99%
Xylene	0.28	0.00	0.19	0.09	0.000%	68%	32%
							99.9%

Fraction WW discharges to POTW 2016

Total annual 2016 to POTW	14600385	14.600 mg	gy 47.1 ⁹	%
Total annual 2016 to Sampit	16366111	16.366 mg	gy 52.9 %	%
Total discharge 2016	30966496	30.966 m	αv	

Water 9 Data 2016

	Inlet rate	Outlet rate	Qty to air	Qty to bio	Outlet rate	Qty to air	Qty to bio
	lb/hr	lb/hr	lb/hr	lb/hr	% of inlet	% of inlet	% of inlet
MeCl	0.024	0.00	0.0155	0.0083	0.0010%	74%	26%
MEOH	5.82	0.00	0.07	5.74	0.045%	1%	99%
Xylene	0.28	0.00	0.19	0.09	0.000%	68%	32%
							99.9%

Hope this helps w/ your investigation

'Vince

From: Au, Doreen [mailto:Au.Doreen@epa.gov]

Sent: Monday, July 24, 2017 3:33 PM

To: Vince Centioni

Cc: Scott McNair; Ryan Dorsey; Schneider, Matthew; Alex Llyod; Paul Hancock

Subject: RE: A few follow-up questions

Hey Vince,

Would it also be possible to get the V584 analysis spread sheets for 2012-2016 in excel format as well? Thank you. -Doreen

From: Vince Centioni [mailto:V.Centioni@3vsigmausa.com]

Sent: Monday, July 24, 2017 10:54 AM **To:** Au, Doreen Au,Doreen@epa.gov>

Cc: Scott McNair < <u>S.McNair@3vsigmausa.com</u>>; Ryan Dorsey < <u>R.Dorsey@3vsigmausa.com</u>>;

Schneider, Matthew <<u>Schneider.Matthew@epa.gov</u>>; Alex Llyod <<u>a.lloyd@3vsigmausa.com</u>>; Paul

Hancock < P.Hancock@3vsigmausa.com > Subject: RE: A few follow-up questions

Importance: High

Doreen,

Scott gave me verbal permission to send you the excel files you requested.

'Thanks Vince

Vince Centioni

Environmental Manager

<image001.png>

888 Woodstock St.

Georgetown, SC 29440 Office: 843-520-5128 Mobile: 843-240-0577

Email: v.centioni@3VSigmaUSA.com

From: Au, Doreen [mailto:Au.Doreen@epa.gov]

Sent: Monday, July 24, 2017 12:42 PM

To: Vince Centioni

Cc: Scott McNair; Ryan Dorsey; Schneider, Matthew; Alex Llyod; Paul Hancock

Subject: RE: A few follow-up questions

Thank you Vince,

For the wastewater tanks and for the accumulator that was receiving the overheads from the wastewater stripper, we wanted to know what the conservation vent pressure set points were. There were a few tanks that use a conservation vent instead of a gooseneck. These were the tanks Ryan and I went to visit in the field to see how they were vented.

I would like to compare the sample results, however I would have to get permission from Region 4 (I can talk with them), in addition, our samples results are going through our rigorous accreditation reviews and are not available (even to me) yet.

Thanks Vince.

From: Vince Centioni [mailto:V.Centioni@3vsigmausa.com]

Sent: Monday, July 24, 2017 10:35 AM **To:** Au, Doreen <<u>Au.Doreen@epa.gov</u>>

 $\textbf{Cc:} \ Scott \ McNair < \underline{S.McNair@3vsigmausa.com}; \ Ryan \ Dorsey < \underline{R.Dorsey@3vsigmausa.com}; \ Schneider, \ Matthew < \underline{Schneider.Matthew@epa.gov}; \ Alex \ Llyod < \underline{a.lloyd@3vsigmausa.com}; \ Paul$

Hancock < P.Hancock@3vsigmausa.com > **Subject:** RE: A few follow-up questions

Importance: High

Au Doreen,

- 1.) Once I get permission from Scott McNair I will send the excel files you are requesting.
- 2.) What data are you looking for? Specifically. I was under the impression 3V explained the logic behind how the tanks are currently vented (see John Schroer email, who last wrote 3V MON NOCS revision). Since you and Ryan Dorsey communicated verbally over the phone (see email) he may be better prepared to provide a time frame. He probably needs to know exactly what data you are requesting....
- 3.) Do you want to compare the sample results from the external lab, alongside our internal QC lab reports? I would like to see the EPA's analytical report and compare.

'Thanks Vince

Vince Centioni
Environmental Manager
<image001.png>
888 Woodstock St.
Georgetown, SC 29440

Office: 843-520-5128 Mobile: 843-240-0577

Email: v.centioni@3VSigmaUSA.com

From: Au, Doreen [mailto:Au.Doreen@epa.gov]

Sent: Monday, July 24, 2017 11:48 AM

To: Vince Centioni

Cc: Scott McNair; Ryan Dorsey; Schneider, Matthew

Subject: A few follow-up questions

Good Morning Vince,

I hope you had a good weekend. I was going through and reviewing the documents that were provided, and the copy of the analysis provided for water to WWTP (including all tanks sorted by tank numbers) for 2015, appears to only have the first page from 2015, and the remaining pages have data from 2013. Can we please have the data from 2015? If it is possible could we also please have the data in excel for the other years? (2013-2016)

In addition, for any outstanding questions, including pressure set points for the conservation vents on wastewater tanks, and looking for written maintenance wastewater plans, etc. do you have an estimated timeframe for sending that data?

I would also again, welcome any additional information you would like to provide for NEIC to

incorporate into their reports to Region 4 at this time.

Thank you,

Doreen

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